



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

December 16, 2010

Mr. Duane D. Deaner
Chief Financial Officer
Environmental Tectonics Corporation
County Line Industrial Park
Southampton, PA 18966

Re: Environmental Tectonics Corporation
Form 10-K for the fiscal year ended February 26, 2010
Filed May 27, 2010
Form 10-Q for the quarterly period ending August 27, 2010
File No. 001-10655

Dear Mr. Deaner:

We have reviewed your response dated November 29, 2010 and related filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the fiscal year ended February 26, 2010

Item 8T. Controls and Procedures, page 15

Evaluation of Disclosure Controls and Procedures

1. We refer to your response to comment 6. We see that you propose to continue to conclude that disclosure controls and procedures are effective as of February 26, 2010 notwithstanding the failure to include management's annual report on internal control over financial reporting as of that date. Please tell us how your response considers the specific guidance from Compliance and Disclosure Interpretation 115.02. As stated in the referenced Staff interpretation, failure to file management's report on internal control over financial reporting rendered your annual report materially deficient and also rendered the company not timely or current in its Exchange Act Reporting. In particular, we refer you to the definition of disclosure controls and procedures provided in Exchange Act Rule 13a-15(e), which indicates that effective controls and procedures would ensure that information required to be disclosed by the issuer is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms.
2. As a related matter, please describe to us the control that failed to detect the omission of management's annual report on internal control over financial reporting as of February 26, 2010. Also, describe to us any changes in controls you have implemented to reduce the likelihood of future omissions.
3. We further see that you have determined that earnings per share was not properly determined as of February 26, 2010 because of failure to apply the two class method for participating securities. Please describe to us how you considered the error in continuing to conclude that internal control over financial reporting was effective as of February 26, 2010.

Long-Term Incentive Compensation, page 21

4. We will continue to evaluate your responses to prior comments 7, 8, and 9 when you file the amendment referenced in those responses.

Summary Compensation Table, page 22

5. Please expand your response to prior comment 8 to explain why the amounts you have proposed to include in column (d) of your amended director compensation table are different than the amounts disclosed in your table on page 24. Also,

confirm that these amounts will reflect the grant date fair value of the awards as required by Regulation S-K Item 402(r)(2)(iv).

Exhibit 13. Portions of Environmental Tectonics Corporation 2010 Annual Report....
page 1

Notes to the Consolidated Financial Statements, page 18

Note 2. Summary of Significant Accounting Policies, page 18

Fair Value of Financial Instrument, page 19

6. We refer to your responses to our prior comments 15 and 16. Your response indicates that you do not account for your debt at fair value; and, your debt does not appear subject to a recurring fair value measurement. However, the header to the table on page 19 clearly indicates that the items in the table “are accounted for at fair value.” In future filings, please appropriately revise to clearly distinguish instruments accounted for at fair value from those that are not accounted for at fair value.

Inventories, page 20

7. We refer to your response to our prior comment 21. While we see that you have cited a broad principle in GAAP as the basis for accounting for the deferred costs related to the centrifuge, the response does not cite the specific basis in the literature for the accounting applied in this particular instance. Accordingly, please tell us the specific basis in the FASB Codification on which you relied in determining appropriate accounting for the deferred costs. For instance, please tell us:

- How you evaluated the costs to identify research and development under FASB ASC 730-10-25;
- How you considered the guidance related to start-up cost under FASB ASC 720-15-20 and 15-25; and,
- How you considered the guidance related to pre-contract costs under FASB ASC 605-35-25.

This list is not intended to be exhaustive and you should cite and explain the basis in GAAP on which you actually relied.

8. As a related matter, please tell us the caption where the costs were deferred in property and equipment and clarify for us the factors you considered in assessing whether you should separately disclose deferred costs, such as those related to the

centrifuge, in the tabular data for property and equipment. Also, tell us where you have presented accounting policy disclosure for this practice.

9. Additionally, please explain the basis for expensing the costs over four quarters and clarify how the determination is consistent with your revenue recognition period for the specific contracts.

Earnings Per Common Share, page 22

10. We acknowledge your response to our prior comment 22. Please reconcile the amount of net income for the year ended February 26, 2010 in the response to the corresponding amount presented in the statement of operations included in the Form 10-K for that period.

Note 7. Long-Term Obligations and Credit Arrangements, page 25

Exchange of Existing Instruments for Series E Preferred Stock, page 26

11. We refer to your responses prior comments 23 and 24. In addressing your consideration of the accounting for the embedded conversion feature of the preferred stock, in future filings please describe the underlying terms of the instruments you considered in reaching the conclusion that the economic characteristics and risks of the embedded derivatives were clearly and closely related to the economic characteristics and risks of the host contracts. Further, if you elect to provide literature references in your disclosure, please provide references from the FASB Codification as opposed to the pre-codification literature, as is cited in your response and proposed disclosure.
12. We see your response to prior comment 25; however, it is not clear why the modified instrument does not continue to include a down round provision where the exercise could be adjusted in the event of future issuances of shares or other equity linked instruments at a fair value below current exercise price of the warrants. Accordingly, it remains unclear how you determined that the warrants are indexed to your own stock. In that regard, please provide a response that specifically addresses your consideration of the fixed-for-fixed model beginning at FASB ASC 815-40-15-5. Also, describe how your view considers the example at 815-40-55-33 and 55-34.

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You may contact Leigh Ann Schultz at (202) 551-3628 or Gary Todd at (202) 551-3605 if you have questions on the financial statements and related matters. Please contact Louis Rambo at (202) 551-3289 or Timothy Buchmiller at (202) 551-3635 with any other questions. You may also contact me at (202) 551-3676.

Sincerely,

Brian Cascio
Accounting Branch Chief

for